Installation Guide

HPX-1600 Retractable Connection Port

Overview

The HPX-1600 HydraPort Retractable Connection Port (FG550-cc) is the first completely modular, retractable cable connection system built to accommodate the diverse connection needs of conference and meeting room visitors.

The HPX-1600 is designed to be mounted into a horizontal surface such as a conference room table or lectern in order to provide connectivity for power, networking, Audio/Video and control. Specific connectivity is accomplished by populating the HPX-1600 Base Assembly with various modules.

ATTENTION: Only a professional, AMX-qualified installer should perform this installation. Installation must conform to all local codes. This product may not be installed by the end-user.

Product Specifications

HPX-1600 Specifications	
Dimensions (HWD):	
Max above mounting surface:	9.57" x 10.55" x 4.53" (243mm x 268mm x 115mm)
Max below mounting surface:	15.08" x 11.54" x 6.26" (383mm x 293mm x 159mm)
Min. mounting surface thickness:	19mm (.75in)
Max mounting surface thickness:	50mm (2.0in)
Weight:	
Base Assembly only:	2 Kg (4.41 lbs)
Typical Installation:	3 Kg (6.61 lbs)
Models Available:	• North American, Black trim (FG550-01-BL) • North American, Sliver trim (FG550-01-SL)
Enclosure	Natural finish metal frame with plastic top and bottom covers moving vertically in a plastic sleeve assembly. • Matt black top cover and trim ring (FG550-BL, FG550-01-BL) or matt silver top cover and trim ring (FG550-SL, FG550-01-SL). • Matt black module face plates on all I/O modules.
Rear Connections	Included rear connection – IEC 320 C14 Power cord receptacle (FG550-BL, FG550-SL), Included AC Power Cord (FG-550-01-BL, FG550-01-SL). Rear connections for individual modules are routed through openings in the unit's bottom cover.
Optional Accessories:	• HPX-AC-TK Hydraport Installation Tool Kit (FG559-90) • HPX-AC-HSP Hydraport Spring Kit for Heavy Loads (FG559-42)
Certifications:	UL 962A

The following table lists the components of the (optional) HPX-AC-TK Hydraport Installation Tool Kit:

Optional HPX-AC-TK Hydraport Installation Tool Kit (FG559-90)	
Quantity	**Description**
(1)	HPX-AC-TMPLT 559-91 router template
(4)	Mounting Strips ***Note**: The Mounting Strips are manufactured by 3M™. The 3M part number is "17021P".*
(1)	Router bit (Freud 12-128 or Whiteside 1072)
(1)	Guide Bushing (Woodcraft 144693)
(1)	Lock Nut (Woodcraft 144696)
(1)	Installation Guide

The following sections describe the preparation, installation and setup of the HPX-1600 Hydraport Base Assembly, using the HPX-AC-TK Hydraport Installation Tool Kit (FG559-90).

***Note**: Read these instructions in their entirety before beginning the installation. The installation requires specific steps to be performed in specific order.*

***CAUTION**: This installation kit requires specific woodworking skills. This installation should be performed by an experienced person, comfortable with these type of woodworking operations. Improper use of this tool kit may result in damage to the mounting surface. AMX is not responsible for damage caused by improper use of this tool kit.*

A typical installation will include several of the available modules. Each of these modules has specific instructions for terminating their rear connections.

Refer to the installation guide for each appropriate module during the installation of the Hydraport system.

1) Select a Suitable Location For the HPX-1600

Note the space requirements for installing the system (FIG. 1).

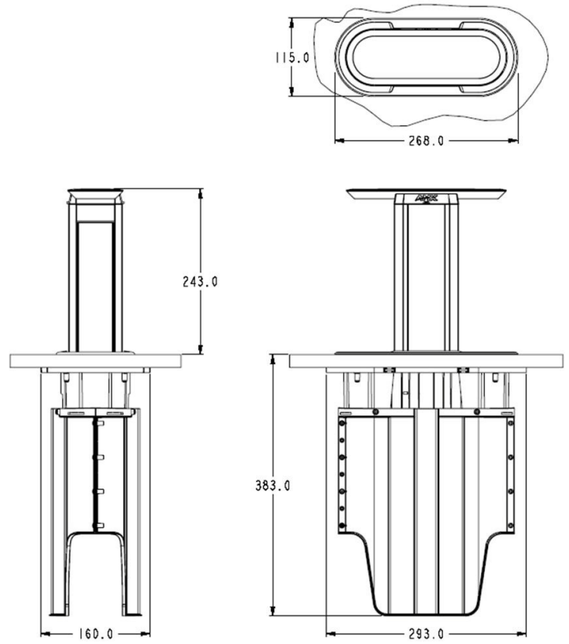

FIG. 1 Hydraport System Space Requirements

- The Hydraport system requires a mounting surface from 19mm (.75in) to 50mm (2.0in) thick.
- The Hydraport system requires at least the following amount of space below the mounting surface to install (see FIG. 1):
  383mm (15.08") height below surface
  293mm (11.54") width
  159mm (6.26") depth
- If the system is to be mounted within a column, pillar or other enclosed space below the mounting surface, please note that final assembly and termination will require the installer to have access to this space below the mounting surface.

Care should also be taken to ensure that the system does not interfere with the normal use of the workspace.

For example, on a table or work surface, ensure that the system does not interfere with the user's legs when they are seated at the table.

***Note:** Even when the system is deployed in the up position, the mounting system and shields occupy the entire space requirement below the table.*

For full warranty information, refer to the AMX Instruction Manual(s) associated with your Product(s).

93-0550-02 REV: B

4/12

©2012 AMX. All rights reserved. AMX and the AMX logo are registered trademarks of AMX.
AMX reserves the right to alter specifications without notice at any time.

3000 RESEARCH DRIVE, RICHARDSON, TX 75082 • 800.222.0193 • fax 469.624.7153 • technical support 800.932.6993 • www.amx.com

2) Cut the Hole In the Mounting Surface

Use the HPX-AC-TK router template (FG559-90) and a suitable router with ½" arbor to create the hole in the mounting surface. FIG. 2 provides the hole cutout dimensions for reference:

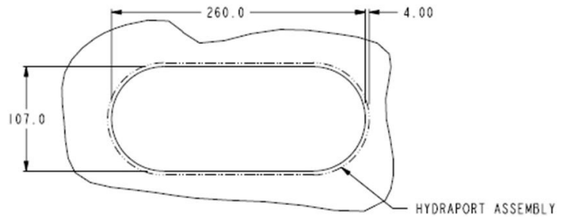

FIG. 2 Hole Cutout Dimensions

1. Carefully measure the tabletop or other mounting surface to locate the desired position of the Hydraport unit.
2. Apply mounting strips or other appropriate double sided tape to the bottom surface of the router template, making sure that the rounded edges of the mounting strips protrude slightly beyond the edges of the template (see FIG. 3).
3. Use the alignment marks scribed on the template to align the template properly on the mounting surface (FIG. 3).

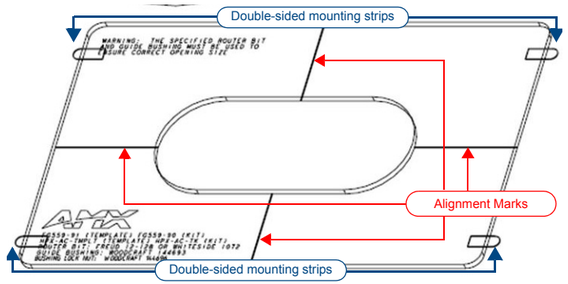

FIG. 3 HPX-AC-T Router Template

- Note that due to the guide bushing and router bit, the final cutout will be smaller than the opening in the template. The cutout in the mounting surface will be offset to the inside of the template opening by 1/8th inch (3.2 mm) on all sides.
- Note both the position and orientation of the template relative to the table top or other mounting surface.
- Note that very little clearance exists between the Hydraport assembly and the hole cutout in the mounting surface. Take care to align the cutout carefully with the edges or other appropriate features in the table or mounting surface. If the cutout is misaligned, the installed unit will be misaligned.

***CAUTION:** Ensure the template is held securely on the mounting surface. If the template moves during the cutting process, the cutout will be enlarged and will likely exceed the trim bezel of the Hydraport base assembly, requiring extensive repair to the mounting surface.*

4. Install the router guide bushing into the base of a suitable router.
   - The router should be equipped with a ½ inch (12.2mm) collet and a baseplate capable of accepting a standard 1 3/16 inch (30.2mm) guide bushing.
   - Install the router bit into the router with an appropriate portion of the bit exposed below the guide bushing.
5. Switch the router on and carefully lower (plunge) the router bit into the mounting surface within the template opening.
6. Move the router against the template opening such that the guide bushing follows along the template opening.
7. Carefully follow the template opening with the guide bushing in a clockwise fashion such that the cutting action of the router bit is acting against the motion of the router.
8. Make several passes with the router, guide bushing and router bit.
9. Lower the router bit in small increments to remove a suitable amount of material on each pass.

***CAUTION:** Trying to cut too deep in any one pass may result in damage to the mounting surface.*

- Take care to ensure that the top surface of the mounting surface is not damaged beyond the width of the trim bezel as the cutout is made.
- Make sure the bit or cutting tool used is appropriate for the material to be cut and will not tear or chip the top surface.
- AMX does NOT recommend using a Jigsaw to make the final cutout.
- Note that the process of making the cutout will create substantial dust and prepare the environment appropriately.

10. Finally, remove template by pulling firmly on the rounded edges of the double-sided tape mounting strips until they release from the tabletop and template.

3) Prepare the Terminations

Some modules that are included in the final system require some type of backside termination. Refer to the installation guide for each module to determine the required backside termination.

***Note**: The backside termination for each module can and should be completed before the module is installed into HPX Base assembly.*

Note that for terminations for which the far end of the cable is not accessible either because the cable has been run under carpet, in a conduit or structure, or is otherwise fixed, the cable must be placed:

1. Through the retaining ring, (note the orientation of the retaining ring - see FIG. 4 on page 2),
2. Then through the mounting surface from bottom to top,
3. Then to the connector emanating from the HPX-1600.

Note the direction of the screw bosses, as indicated in FIG. 4:

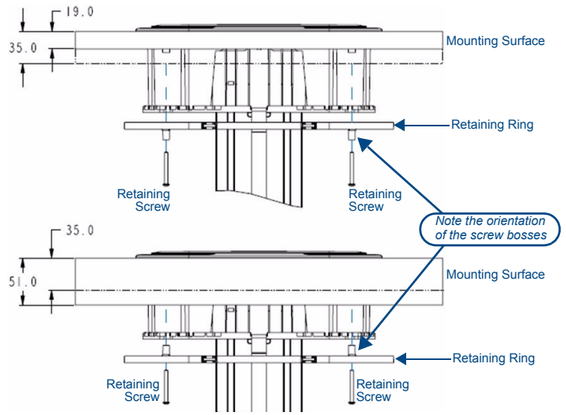

FIG. 4 Direction of the Screw-Bosses, based on surface thickness (19mm vs. >19mm thick)

- For mounting surfaces less than 35mm thick, orient the screw bosses away form the main assembly (down).
- For mounting surfaces greater than 35mm thick orient the screw bosses toward the main assembly (up).

4) Install the Lift Spring Assemblies

ATTENTION: If modules have been installed in more than 50% of the available space, the performance of the HPX-1600 retract mechanism may benefit from the installation of the optional accessory HPX-AC-HSP (FG559-42). See the installation guide for HPX-AC-HSP for further details.

After the bottom cover is fully secure and the exiting cables are secured:

1. Clip both lift spring assemblies onto the mounting sleeve.
2. Ensure the lift spring assembly is oriented properly (FIG. 5).

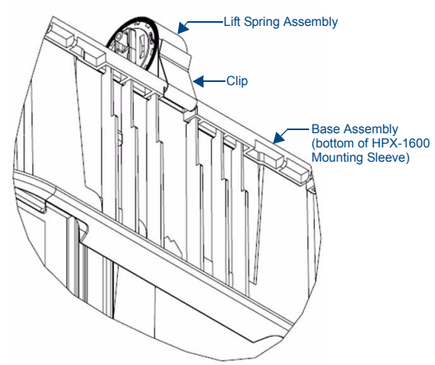

FIG. 5 Lift spring assembly clipped to main sleeve

3. Unlatch the sliding frame and mounting sleeve so the sleeve is free to slide relative to the frame.
4. Slide the mounting sleeve so that it is nearest to the bottom cover.

5. Take hold of the body of one lift spring assembly and pull it firmly up so that it can be snapped into the provided slot in the bottom cover (FIG. 6).

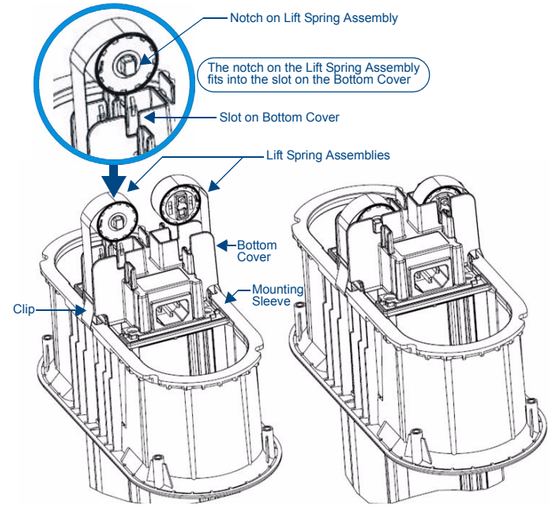
Notch on Lift Spring Assembly
The notch on the Lift Spring Assembly fits into the slot on the Bottom Cover
Slot on Bottom Cover
Lift Spring Assemblies
Bottom Cover
Mounting Sleeve
Clip

FIG. 6 Inserting the Lift Spring Assembly Into the Bottom Cover

6. Repeat for the second lift spring assembly
7. Slide the mounting sleeve towards the top of the unit until the unit latches in the closed position.

5) Install the System Into the Mounting Surface

Turn the system over and install the unit into the cutout in the mounting surface.

- Make sure that all cables from the backside terminations pass through the cutout.
- Note that any fixed cables should already be passed through both the mounting surface and retaining ring.

6) Install the Retaining Ring

1. Insert the four #6-32 x 1 3/8 retaining screws into the retaining ring.

   Note the orientation of the retaining ring. This orientation changes in order to accommodate the various thicknesses of mounting surfaces (see FIG. 4 on page 2).

   Note the direction of the screw bosses.

   For mounting surfaces less than 35mm thick, orient the screw bosses away form the main assembly (down).

   For mounting surfaces greater than 35mm thick orient the screw bosses toward the main assembly (up).
2. Place the retaining ring over the lower portion of the base assembly and against the underside of the mounting surface.

   If an accessory mounting bracket HPX-AC-MB (FG559-21) is to be used, install it now by trapping it between the retaining ring and mounting surface
3. Gradually tighten the 4 retaining screws to secure the unit in the mounting surface.
   - Ensure the unit is properly aligned in the mounting surface.
   - Torque the retaining screws to approximately 3 in-lbs.
   - Do not over tighten the screws.
4. After tightening the retaining screws ensure the unit moves smoothly up and down.
   - Over tightening the retaining screws can cause the system to bind.
   - If the system binds, gradually loosen the retaining screws until it operates smoothly.

7) Install Shields

1. Secure the 2 shields to each other using the 8 supplied screws.
2. Ensure that any fixed cables pass through the assembled shield appropriately.
3. Snap the assembled shield onto the lower portion of the mounting sleeve.

Install the 4 additional mounting screws into the top of the shield to secure the shield to the mounting sleeve

8) Secure Cables

Terminate the backside connections as required for each cable exiting bottom of the HPX-1600. Secure these cables and the power cable to the 4 tabs provided on the retaining ring using the supplied wire ties (FIG. 7).

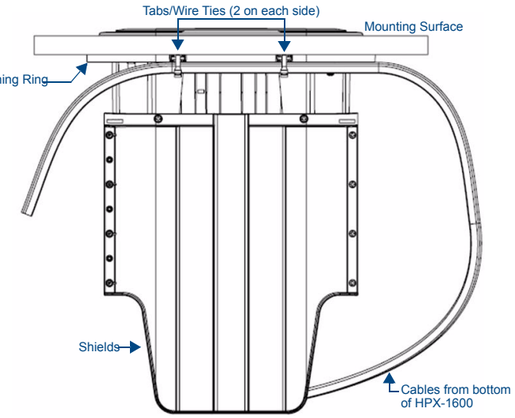

FIG. 7 Secured Service Loop

- Ensure there is sufficient service loop to allow the system to travel in its full range of motion.
- Avoid excess service loop as this can place significant weight on the sliding and lifting mechanism and prevent the system from functioning properly.
- Ensure the service loop does not catch on the shields or any other obstruction and is away from users who might kick or snag the cables.
- Secure the cables in at least one additional location after they have been secured to the retaining ring so as to prevent undue stress on the system if the cables are inadvertently kicked, snagged or pulled.

***Note**: The socket-outlet (Connection to Mains Power branch circuit) shall be installed near the equipment and shall be easily accessible.*

Additional Documentation

For more detailed installation instructions with additional drawings, please refer to the HPX-1600 Installation Guide, available to view or download from www.amx.com.